CS 475/575

Chih Hsuan Huang

ID: 934554197

huanchih@oregonstate.edu

Project #5

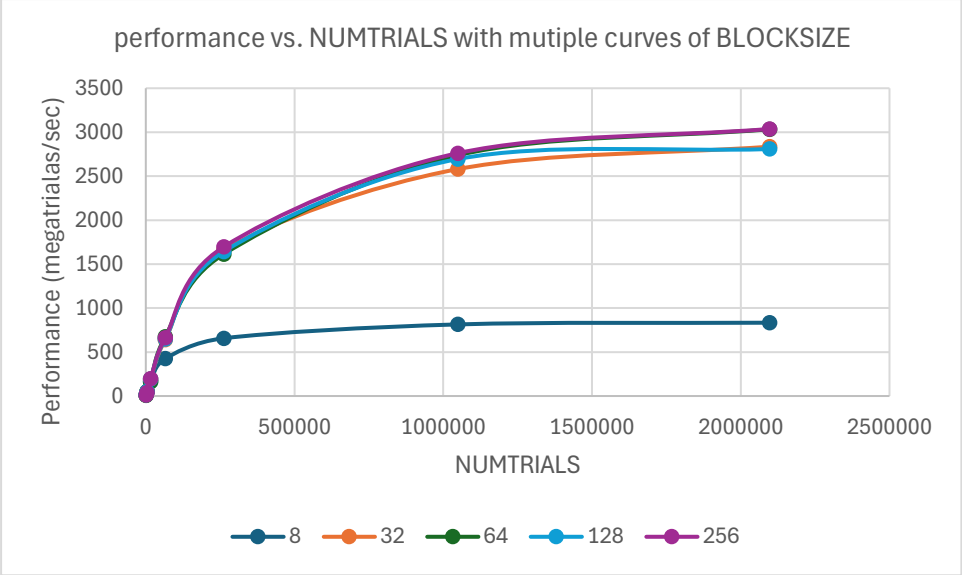
CUDA: Monte Carlo Simulation

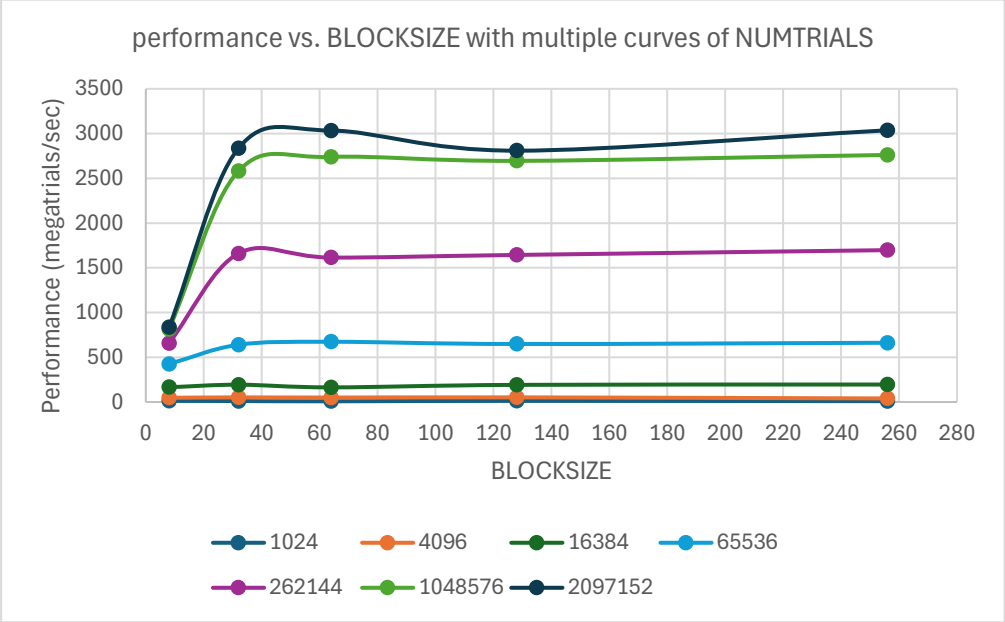
1. Tell what machine you ran this on

   rabbit

2. What do you think this new probability is?
3. Show the rectangular table and the two graphs

Number of Trials	BlockSize	MegaTrials/Second	Probability
1024	8	12.6382	83.69
1024	32	10.9178	83.69
1024	64	7.909	82.62
1024	128	13.0666	84.67
1024	256	9.5665	84.18
4096	8	47.1802	84.64
4096	32	51.5921	83.57
4096	64	49.6894	84.38
4096	128	51.8429	84.01
4096	256	39.8382	83.64
16384	8	164.8953	83.45
16384	32	193.3535	84.16
16384	64	163.4738	83.72
16384	128	191.4734	83.92
16384	256	195.2708	83.19
65536	8	425.0727	83.79
65536	32	639.6003	83.7
65536	64	673.0201	83.95
65536	128	647.8962	83.84
65536	256	661.9263	83.69
262144	8	657.042	84.02
262144	32	1659.9797	83.82
262144	64	1614.1871	83.88
262144	128	1643.6596	83.87
262144	256	1697.1203	83.85
1048576	8	814.4153	83.79
1048576	32	2580.5638	83.83
1048576	64	2738.8834	83.84
1048576	128	2694.9584	83.79
1048576	256	2761.2708	83.79
2097152	8	833.8337	83.82
2097152	32	2835.7059	83.78
2097152	64	3033.7933	83.8
2097152	128	2808.7258	83.81
2097152	256	3036.7453	83.75





4. What patterns are you seeing in the performance curves?
5. Why do you think the patterns look this way?
6. Why is a BLOCKSIZE of 8 so much worse than the others?
7. How do these performance results compare with what you got in Project #1? Why?
8. What does this mean for what you can do with GPU parallel computing?